

Amendments to the specification

Amend the paragraph commencing on page 3 and ending on page 5 (page 3, line 12 through page 5, line 17), as follows:

Implementations of the invention may also include one or more of the following features. Each queue group component is associated with at least one of a logically-lower queue and a logically-lower queue group, and the controller is configured to determine a discard priority, of at least one of the queue group components in the group of queue group components at the first level, for packet discard selection. The controller is configured to determine the discard priority based on at least one of queue size, type of source, size of source, and service requirements associated with a queue. The controller is configured to determine a discard value. The discard value varies directly with queue size. The controller is configured to determine a discard priority, of at least one of the queue group components at the second level, for packet discard selection. The controller is configured to determine the discard priority for packet discard selection for the at least one queue group component at the first level and the at least one queue group component at the second level differently. The controller is configured to discard at least one packet of data of a queue associated with a queue group component having a highest discard priority of the queue group components in the group at the first level. The group of queue group components at the first level is a first group, and wherein the controller is configured such that if the queue group component having the highest discard priority of the queue group components in the first group includes a second group of queue group components at the second level, the controller determines a discard priority for each queue group component of the second group of queue group components and discards at least one packet of data of a queue associated with a queue group component in the second group having the highest discard priority from among the second group. The at least one packet discarded by the controller is disposed at one of a head of, a tail of, and a random location in, the queue associated with the queue group component having the highest discard priority of the queue group components in the first group. The controller is configured to discard multiple packets of data from the queue associated with the queue group

component having the highest discard priority regardless of whether the discard priority changes before all of the multiple packets of data are discarded. The controller is configured to determine the discard value for at least one queue group component in the group at the first level in a different manner than for at least one other queue group component in the group at the first level. The controller is configured to determine the discard value for the queue group component at the first level of the hierarchy that includes the group of queue group components at the second level of the hierarchy, the primary component, based on at least one of an effective size of the queue group and an effective size of a queue, at a level logically lower in the hierarchy than the second level, that is associated with at least one of the components at the second level that is associated with the primary component. The controller is configured to discard at least one packet of data of a queue associated with a queue group component having approximately a highest discard priority of the queue group components in the group at the first level. The controller is configured to discard at least one packet of data of a queue associated with a queue group component having a discard priority that is within a highest-priority range of discard values that is associated with at least one of the queue group components in the group of queue group components at the first level. The controller is configured to discard at least one packet of data of a queue associated with a queue group component in response to the memory at least attempting to store an amount of data that would exceed a data amount limit for the memory. The controller is configured to discard at least one packet of data of a queue associated with a queue group component in response to the memory at least attempting to store an amount of data that would exceed a data amount limit for a group of queues. The at least one packet of data is discarded from a queue other than a queue associated with the group whose data amount limit the memory at least attempting to exceed. The at least one packet of data is discarded regardless of whether the memory is at least attempting to store an amount of data that would exceed a data amount limit for the memory. The controller is configured to discard at least one packet of data of a queue associated with a queue group component according to at least one of: in response to the memory at least attempting to store an amount of data that would exceed a data amount limit associated with the system, and random early discard. The data amount limit is a queue size limit.